DEVELOPMENT OF NAV KARAOKE SEARCH PLACES APPLICATION IN BANDUNG USING ANDROID PLATFORM

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ABSTRACT

falseone sector of the entertainment industry is growing rapidly in Indonesia today is a karaoke place that became a favorite place to spend time gathering and become a means of entertainment. NAV karaoke is a karaoke entertainment company where family founded in 2000 and quickly became a prominent family karaoke entertainment in Indonesia. Along with advances in information technology needs of end against NAV karaoke sebandung greater. Now it has more than 80 branches spread throughout Indionesia and still growing rapidly.

Utilization of technology to be used is to utilize one technologies on the android operating system platforms such as A-GPS which is a refinement of GPS as a satellite to determine the latitude and longitude coordinates of the location. Uber API is issued by uber services to make it easier for developers to openserviceuber transport in big cities. With the API, developers can integrate on-demand transport service owned Uber into the application. While Google Cloud Messaging is a technology to help send the data from the server to the android device directly through the google servers, the utilization of this technology is typically used for push messaging features that will be used to send notification messages to the system built.

The software is built is used to help the visitors to search the karaoke place nav sebandung. Based on test results using black box testing methods can be concluded that the software is built, enables visitors to search the karaoke place nav sebandung.

Keywords: Tourist, Travel, Tourism, itinerary, Android.

1. PRELIMINARY

One sector of the entertainment industry is growing rapidly in Indonesia today is a karaoke place that became a favorite place to spend time gathering and become a means of entertainment. NAV karaoke is a karaoke entertainment company where family founded in 2000 and quickly became a prominent family karaoke entertainment in Indonesia. Now it has more than 80 branches spread throughout Indionesia and still growing rapidly to provide entertainment for the whole family, from children to adults, even seniors. Along with advances in information technology needs of end against NAV karaoke sebandung greater.

Based on the survey through questionnaires that have been made and distributed to 50 respondents of visitors Nav karaoke sebandung, gained some problems that exist in this time that visitors Nav karaoke sebandung today still find it difficult to find information about the Nav Karaoke sebandung and difficulty in finding and make booking a place in Nav Karaoke in bandung.

In addition, problems also arise when the visitors do not bring personal vehicles in dire need of transportation to get to the karaoke NAV want in the message. Visitor activity depends a lot on transport and communications. Time and distance factors strongly influence people's desire to travel to get to the desired place. Progress transport facilities to encourage the advancement of tourism and reverse the expansion that occurred in the tourism industry can create demand for transportation that can meet the needs of visitors. Uber is a technology company that provides online applications for transport. Of the other applications that only uber its API can be used to create applications as an additional feature in an application.

Based on the description of the problem which has been described above, then it becomes a basis for making an application can mebantu NAV karaoke visitors to search for locations, find locations, can make reservations NAV karaoke room, and obtain transportation services to facilitate visitors through smartphone apps.

1.1. Uber history

uberare startups and enterprise transport networks, of San Francisco, California, which creates a transport provider applications that connect passengers with rented vehicle driver and ride service. The company set the pick-up service in various cities around the world.

1.2. Android

Android is a Linux-based operating system designed for touch screen mobile devices such as smart phones and tablet computers. Android was originally developed by Android, Inc., with financial support from Google, which then bought it in 2005. The operating system was released officially in 2007, in conjunction with the establishment of the Open Handset Alliance, a consortium of companies hardware, software, and telecommunications that promotes open standards mobile devices. The first Android phone went on sale in October 2008 [1],

1.3. web Service

W3C defines a Web service as a software application that can be identified by URI and has an interface that is defined, described and understood by XML or JSON and also supports direct interaction with a software application to another by using message-based XML or JSON over internet protocol Web service is a software application that is not affected by platform, providing those methods that can be accessed by the network. Web Service will also use XML to exchange data, especially on the two different business entities. Some characteristics of a web service is:

1. *Message-based*
2. *Standards-based*
3. *Programming language independent*
4. *Platform-neutral*

Several key standard in the web service is: JSON, XML, SOAP, WSDL and UDDI [2]:

1.4. JSON

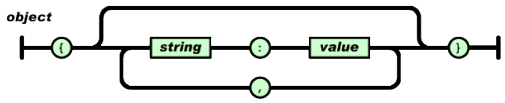
JSON (JavaScript Object Notation) is a lightweight data interchange format, readable and writable by humans, as well as easily translated and made (generated) by the computer. This format is based on part of the programming language JavaScript, Standard ECMA-262 3rd Edition - December 1999. JSON is a text format that is independent of any programming language because it uses a style that is commonly used by programmers family of C including C, C ++, C # , Java, JavaScript, Perl, Python etc. Because of these properties, making it ideal as a JSON data interchange language. JSON is made of two structures:

1. Set of name / value pairs. In some languages, this is stated as an object (object), record (record), structure (struct), dictionary (dictionary), the hash table (hash table), keyed list (keyed list), or associative array[3],
2. Terurutkan value list (an ordered list of values). In most languages, this is expressed as an array (array), vector (Vector), lists (list), or sequences (sequences)[3],

These data structures referred to as a universal data structure. Basically, all modern programming languages support this data structure in the form of the same or different. It deserves to be called so because the data format is interchangeable with programming languages are also based on this data structure. JSON using the following forms:

1. objects

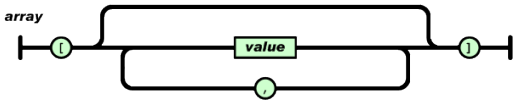
The object is a pair of name / value is not terurutkan. The object begins with {(brace) and ends with} (curly brackets). Each name is followed by: (colon) and each name / value pairs are separated by, (comma). The object is usually used to store a single data in the form of JSON[3],



Picture 1 JSON objects

2. array

Array is a collection of value terurutkan. An array begins with [(open square brackets) and ends with] (brackets lid). Each value is separated by, (comma). The array in JSON can be used as a value of the JSON object this can be useful if the JSON data store multilevel[3],



Picture 2 array JSON

Form of JSON data object and the array can be combined with each other to support more complex data structures. JSON supports multiple types of data to be value like figure, String, Boolean and the value NULL[3],

1.5. uber API

Uber API is issued by uber services to make it easier for developers to unlock the uber transportation services in major cities. With the API, developers can integrate on-demand transport service owned Uber into their own applications. For example, if a company has an application inAndroidor iOS, they can combine the Uber service into their transportation services. This service is suitable for companies that need transportation services, both for passengers and goods, such as freight forwarding services. Through the API, developers have access to a variety of features Uber, such as car rental service integration and share a ride available, the following price estimate based on a specific route. The API can also be used to provide an estimation of travel time travel as well as travel records of users. Other features will also be added by Uber in the future. Uber itself has been integrated with the Google Maps application, so that users can compare the journey with other public transport modes.

1.6. Blackbox testing

Blackbox testing methods focus on search purposes functional errors of the software. Trial blackbox trying to find errors in several categories, including:

1. These functions are incorrect or missing
2. errors interface
3. Errors in data structures or external database access
4. error performance
5. Initialization and termination errors

Black box testing technique consists of 10 types including Equivalence Partitioning, Boundary Value Analysis / Limit Testing, Comparison Testing, Sample Testing, Robustness Testing, Testing Behavior, Requirement Testing, Performance Testing, Endurance Testing, Cause-Effect Relationship Testing. One of them will be discussed is the Equivalence partitioning.

*Equivalence partioning*a blackbox testing method that divides the input domain of a program into classes of data from test cases are generated. Test case handling single ideal discovered a number of errors (eg: fault processing of all data characters) which is another requirement of a case that is executed before the common errors observed.

1.7. testing Questionnaire

The questionnaire is a list of statements that should be filled by people who will be evaluated (the respondent). The method used in this study was a questionnaire on Likert scale. In a Likert scale, respondents were asked to read carefully every statement is presented, then he was asked to assess these statements.

Degree assessment of respondents to a statement divided into 5 categories are arranged in a graduated, ranging from Strongly Disagree (ST), Disagree (T), No Decide (N), Agree (S), and Strongly Agree (SS). Or can be otherwise. Statement of each questionnaire was made based on aspects studied. Scoring weights that are used can be found atTable 0.3 Free scoring

Table 0.3 Free scoring

type Statement	The weight of opinion				
	SS	S	N	T	TS
Positive	5	4	3	2	1
Negative	1	2	3	4	5

Scores have been calculated at each statement is then multiplied by the respective weighting in accordance with scenarios questionnaire that has been made. After that the total weight of the whole of the answer and then divide by the total respondents who will be the average value. The average value is taken as a reference attitude whereby if the average value of less than 3, it means respondents are negative and if the average value is more than equal to 3, it means the respondents are more favorable to the goals you want researchers to achieve , For more details can be seen in the formula below.

$$\overline{X} = \frac{\sum Total}{n},$$

Where,

$\overline{X} \geq 3$ *bersikap positif*

$\overline{X} < 3$ *bersikap negatif*

Information :

$\overline{X}$ = Average

$\sum Total$ = *jumlah seluruh nilai setelah dikalikan dengan bobot*

n = total respondents

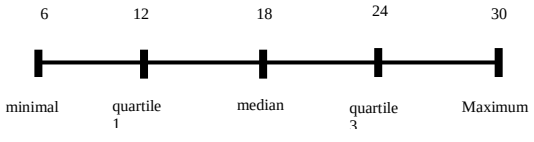
Example, suppose the questionnaires filled out by 5 respondents regarded as samples with the results shown in the following table. What is the smallest and biggest score for the respondents and the total of all respondents.

Table 1Scores Results Item Question Of All Respondents

No. respondents	Item / Item Questions						Total
	1	2	3	4	5	6	
1	5	3	4	1	2	2	18
2	4	2	4	2	4	1	17
3	5	3	3	1	3	2	17
4	4	3	4	1	2	2	16
5	4	3	3	2	3	1	16
Total							84

Based on these data, the steps that can be taken to find out
how the attitudes of respondents to the quality of each product are:

1. Specifies the maximum score, which is the biggest answer scores at times a lot of items.
   5 x 6 = 30
2. Specifies the minimum score, the score at the time the smallest answer many items.
   1 x 6 = 6
3. Determining the value of the median, which is the sum of the maximum score with a minimum score divided by two.
   (30 + 6): 2 = 18
4. Determining the value of quartile 1, which is the sum with a median score of at least halved.
   (6 + 18): 2 = 12
5. Determining the value of quartile 3, which is the sum of the maximum score with a median split in two. (30 + 18): 2 = 24.
6. Make a scale that describes the minimum score, score first quartile, median, third quartile and maximum score.



Information :

- Category attitude is very positive, which is the area bounded by the third quartile and maximum score. (Quartile 3 = x = maximum score).
- Category positive attitude, which is the area bounded by the median and quartiles 3. (Median = x <Quartile 3).
- Categories negative attitude, which is the area bounded by the first quartile and median. (Quartile 1 = x <Median).
- Category attitude is very negative, which is the area bounded by the minimum score and quartile 1 (minimum score = x <kuartil1).

record :
Range on a scale above only bring four categories of attitude, this is because the attitude Likert scale does not allow any statement neutral item (doubtful). So the statement in the Likert scale only two, namely, positive item statement and statement of negative items[4],

7. Look limits - limits of scores for each category of attitude. Based on the earlier scale images, the range of scores from all four categories are:

Table 2 Category Score Range Of Attitude

Very Positive Attitude	Quartile 3 ≤ x ≤ Maximum Score	24 -30
Positive attitude	Median Quartile ≤ x ≤ 3	18-24
Negative attitude	Quartile 1 ≤ x ≤ Median	12-18
Attitudes Very Negative	Minimum score ≤ x ≤ Quartile 1	6-12

8. Make a frequency distribution table each respondent attitudes toward the product quality.

Table3 Frequency Distribution Table

Category attitude	Category Scores	Frequency	Percentage (%)
Attitude Very Postfix	24 -30	-	-
Positive attitude	18-24	1	20%
Negative attitude	12-18	4	80%
Attitudes Very Negative	6-12	-	-
		5	100

According to the table above shows that the attitude of each respondent about the quality of the product, distributed in the category of a very positive attitude and a positive attitude 80% to 20%. The percentage gives the sense that as many as four people (80% of total respondents), and as many as 1 person (20% of total respondents) considered a negative attitude towards the quality of products produced yag.

2. Research Content

2.1. Problem analysis

Analysis of the problem is the stage to collect and determine issues that are the core of the idea of building software. Visitors are feeling difficulty in finding information NAV karaoke sebandung, For visitors who do not bring personal vehicles is very difficult to get the public transport services in NAV karaoke sebandung, visitors really feel difficulty in performing the booking room at NAV karaoke sebandung.

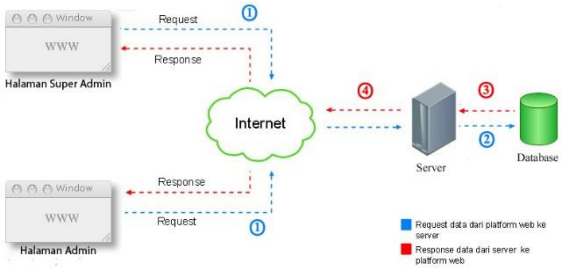
2.2. System Architecture Analysis

The analysis aims to identify the system architecture architecture that will be built based on two subsystems web and mobile.

a. web

The analysis aims to identify the system architecture architecture that will be built based on two subsystems web and mobile.

Web Platform is one of the subsystems selected for the development of this software. Users software platform is divided into two, namely administrators and users. Administrator tasked to process the data user content, while for users used to process data records user journey.The following is Picture 3 Architecture software on web platform, This image depicts the overall architecture of the system on a web platform.



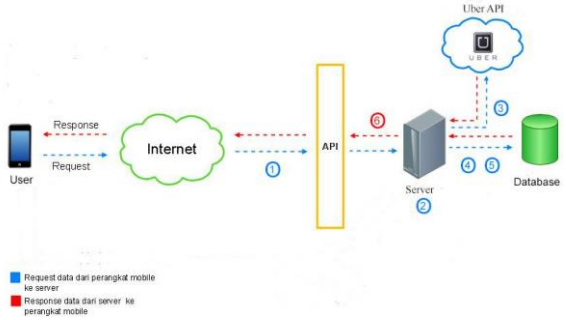
Picture 3 Architecture software on web platform

Below is a description of Picture 3 Architecture software on web platform:

1. Super sub system admin and admin requests a data request to the server through the Internet.
2. The server receives request data query and retrieve data on demand from the database. If the requested data is on the server, the server makes a request that is sent to the server.
3. Server response requested data server and send data back to the server.
4. The server sends the requested data through the Internet to a computer Super admin and admin.

b. Mobile

The mobile platform is one of the subsystems selected for the development of this software. Architecture software on the mobile platform illustrates how the software interact with each other as illustratedPicture 4 Architecture software on mobile platform, The image depicts the overall architecture of the system on the mobile platform.

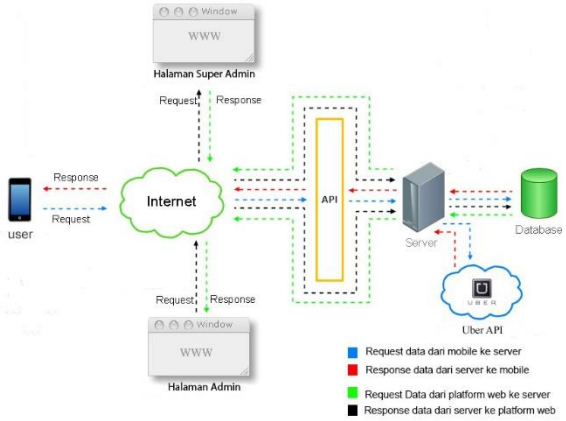


Picture 4 Architecture software on mobile platform

Below is a descriptionPicture 4 Architecture software on mobile platform :

1. The mobile device user request data to the server via the API.
2. The server receives request data from the server and determines the type of request that is requested.
3. If the server receives a reservation request uber the data request will be forwarded to the server Uber API.
4. If the server receives requests for user data, the demand for data will be routed to the server
5. If the server receives text data requests, the server will immediately take the existing data in the database.
6. After the server receives the data requested data will be returned in the form of JSON for processing the user's mobile device.

The system architecture depicted in Picture 4 Architecture software on mobile platform is a depiction of a system based on the perspective of two subsystems, while in Picture 5 Overall System Architecture describes the system architecture of an overall perspective.



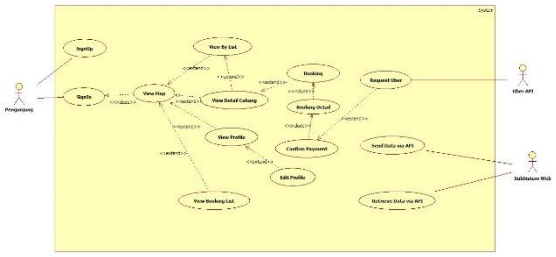
Picture 5 Overall System Architecture

2.3. Functional Needs Analysis

Functional Needs Analysis system will be discussed in this research is the analysis of the functional needs of Mobile and web admin.

1. Mobile Use Case Diagram

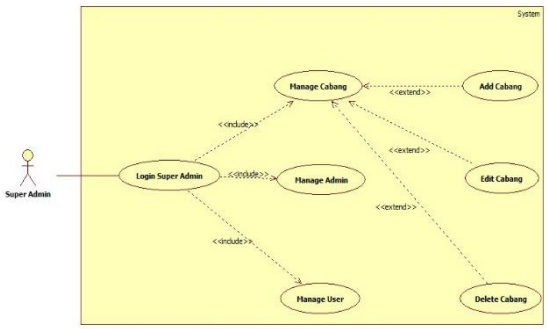
Mobile Use Case Diagram is a model to describe the behavior (behavior) software that will be created. The following isPicture 6 Use Case Diagram,



Picture 6 Use Case Diagram

2. Use Case Diagram Web Super Admin

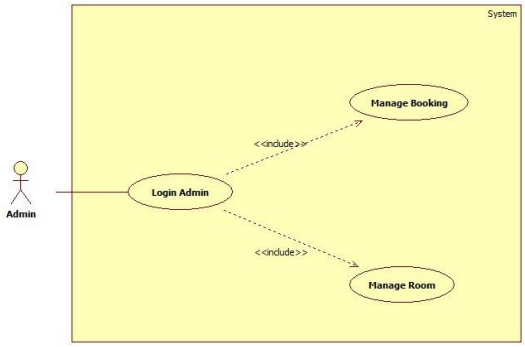
Use Case DiagramWeb Super Admina modeling to describe the behavior (behavior) software that will be created. The following isPicture 7 Use Case Diagram Web Super Admin,



Picture 7 Use Case Diagram Web Super Admin

3. Use Case Diagram Web Admin

Use Case Diagramweb Admina modeling to describe the behavior (behavior) software that will be created. The following isPicture 8 Use Case Diagram Web Admin,



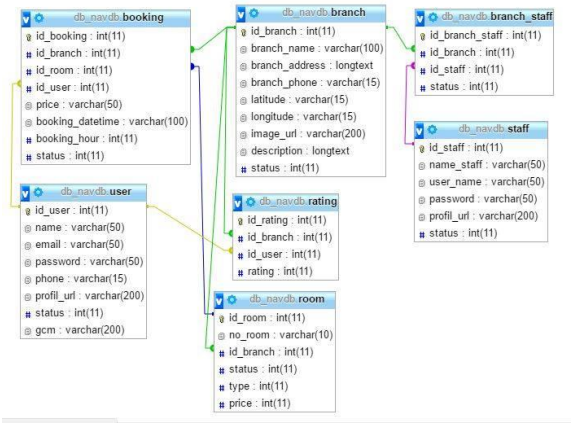
Picture 8 Use Case Diagram Web Admin

2.4. Design Data

Here is the data from the design software built

1. Relationship diagram

The following isPicture 9 Relationship diagram of software built.



Picture 9 Relationship diagram

2.5. System implementation

Implementation of the system is done with this by describing the implementation environment where the system will be planted or installed. Then, by making implementation descriptions of the data used during the construction of the system.

1. Specifications Hardware Requirements

Here are the hardware requirements specification used in the construction of this software:

Table 4 Hardware Software Development Environment

Computer	Android
1. Processor Core i7 Quad-core 3.0 GHz	1. 1.2 GHz Dual Core Processor
2. Computer with VGA onbar 1GB	2. Android device with 1 GB RAM
3. Computer with a screen resolution of 1366x768	3. Android device with a screen resolution of 1080x1920
4. A computer with 4 GB RAM	

Here are the minimum hardware specifications to access the system:

Table 5 Environment Minimum Hardware

website	Android
1. 2.2 GHz Dual Core Processor	1. 1.0 GHz Dual Core Processor
2. Computer with 512MB VGA onbar	2. Android device with 1 GB RAM
3. Computer with a screen resolution of 1024x720	3. Android device with a screen resolution of 854x480
4. Computers with 1 GB RAM	

2. Software Requirement Specification

Here are the software requirements specification used in the development of this software are:

Table 6 Software Software Development Environment

website	Android
1. Operating Systems Windows 10 Pro 64bit	1. Operating System Android 5.0.2 Lollipop
2. Code Editor Sublime Text 3	2. Integrated Development Environment (IDE) stuido Android 2.1.1
3. Web Server XAMPP 1.8.1	3. Android Framework SDK
4. Google Chrome Web Browser 49.0	4. Code Editor Sublime Text 3

Here are the specifications of the software to access the system:

Table 7 Minimum Environmental Software

website	Android
1. The operating system (platform independent).	Android OS 4.3 Jelly Bean
2. Web Browser 20.0 Mozilla Firefox, Google Chrome 30.0.1750.154	

3. Needs Server Specs

Here are the requirements specification servers used to access the system:

Table 8 Requirement Specifications Server

Sub web system
Web Space 500 MB
50 GB Bandwidth Month
MySQL Database (05/05/50 -cll)
PHP (5.4.36)
CPanel 11.46.2
Apache 2.2.29

2.6. implementation interface

Here is a mobile subsystem interface implementation.

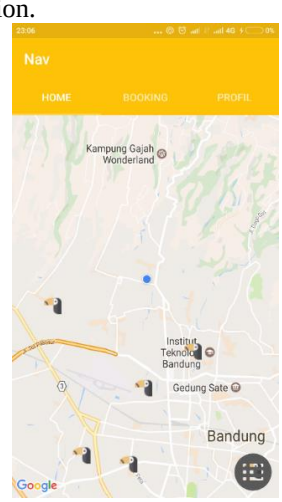


Figure 8 Interface View menu

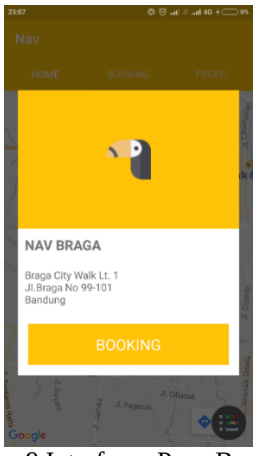


Figure 9 Interfaces Page Booking



Figure 10 Interface Booking List

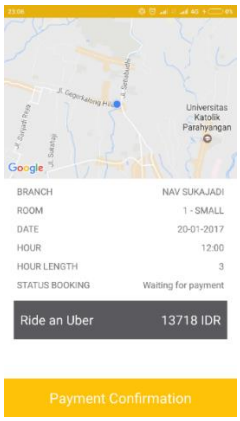


Figure 10 Interface Request Uber

2.7. testing Systems

The software testing is a stage to discover errors and deficiencies in software built so they can know whether the software has met the criteria in accordance with the purpose or not.

1. Alpha Testing Conclusion

Based on the results of software testing is done, it can be concluded that the software on android platform that is built has been running as expected both in terms of process validation and error handling.

2. Beta Testing Results

From the results of the calculation details of the questionnaire can be concluded that the first goal it easier for visitors to get the information NAV karaoke sebandung which has an average value of 4.17 NAV software which is considered positive and helpful to visitors.

Then the second goal which provide services to visitors who do not bring personal vehicles to get the public transport services to get to the NAV karaoke sebandung has an average value of 4.11 NAV software which is considered positive and helpful to visitors.

From the results of the calculation details of the questionnaire can be concluded that the first goal Providing efficient time visitors to book room in NAV karaoke sebandung which has an average value of 4.33 NAV software which is considered positive and helpful to visitors.

3. Conclusions and recommendations

3.1. Conclusion

Based on test results retrieval software development karaoke place nav sebandung using android platform is then obtained the following conclusions:

1. The software is built to help visitors to get information NAV sebandung karaoke. ,
2. The software is built to meet the needs of visitors who do not bring personal vehicles to get transport facilities.
3. Software is built to allow visitors to be more efficient with respect to time in the book sebandung nav karaoke place.

3.2. Recommendations

Search software karaoke place sebandung nav is still far from perfect and still has many shortcomings. Therefore, it is necessary to developments towards the better. The suggestions received from respondents to software development are:

1. Applications for the user can only run on a single platform, the android. We recommend that applications can also be developed on other platforms so that the user can expand the use of this software.
2. Improving the ease of use of the software making it more user friendly.
3. Developing software in terms of performance in order to improve user access to the application.
4. Developing software with API to integrate other transportation service providers online to make it easier for visitors to get transportation services.

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